

# Notice of Allowability

Application No.

10/700,095

Examiner

Caixia Lu

Applicant(s)

DALL'OCCO ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to divisional applicatnion filed on Nov. 3, 2003.
2. ☒ The allowed claim(s) is/are 23-25,30 and 31.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☒ Certified copies of the priority documents have been received in Application No. 09/914,411 .
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 2/2/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney William Reid on July 9, 2004.

The application has been amended as follows:

Cancel Claims 33-35.

The scope of claims 33-35 directed to an ethylene copolymer are different from the scope of claims 23-25 and 30-31 which are directed to a ligand compound or a transition metal complex containing a ligand derived from the ligand compound. Claims 23-25 and 30-31 are deemed to be novel, thus, claims 33-35 need to be canceled in order to place claims 23-25 and 30-31 in the condition for allowance.

2. The following is an examiner's statement of reasons for allowance:

The instant claims are directed to ligand compound or a transition metal complex containing a ligand derived from the ligand compound, wherein the structure of the ligand compound contains two bridged moieties, one moiety having a cyclopentadienyl ring and two-five-member-heterocyclic rings and the other moiety is a cyclopentadienyl ring having four nonhydrogen substituents.

Ewen et al. (WO 98/22486) teaches a bridged heterocyclic and cyclopentadienyl group containing ligand compound,  $Y_iR^iZ_{ij}$ , and a metallocene complex of formula (I)

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$Y_jR''iZ_{jj}MeQ_kP_1$ , wherein the Y is a six  $\pi$  electron containing heterocyclic group such as cyclopentadithiopene, and Z is a cyclopentadienyl containing group such as fluorenyl. It would have been obvious for a skilled artisan to pick and choose the Y and Z groups and to prepare the ligand compound and metallocene complex containing bridged cyclopentadithiopene (the two-heteroatom, three-ring moiety which reads on the formula (II) of the instant claims) and fluorenyl. However, as indicated in applicants' response filed on July 28, 2003 in the parent application 09/914,411 (allowed), the metallocene catalyst complex prepared from the ligand compound of instant claims provide much higher activity for ethylene polymerization over the working examples of Ewen. Thus, applicants have criticality and unexpected results of the claimed specified ligand compounds and the transition metal complexes over those of Ewen's. Therefore, the instant claims are deemed to be novel.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The

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fax numbers for the organization where this application or proceeding is assigned is (703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu'.

Caixia Lu, Ph. D.  
Primary Examiner  
July 2, 2004